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Please accept my following comments and those in the attached MS Word document as testimonial in support of suction dredging. I hope the attached information is helpful in establishing a scientifically sound Environmental Impact Report.

My association with problems of mining and surface water contamination began as early as 1974 in the Coeur d Alene mining district relative to the Kellogg, ID mine and smelter.

I am very familiar with suction dredge mining and other forms of gold mining. I have, over the past 15 years or more, observed and participated in suction dredge mining operations.. My exposure to mining techniques have occurred on the Umpqua River, Calapooia River, Quartzville Creek, Stratton Creek and Carberry Creeks in Oregon, the Klamath River and Stanislaus Rivers in California, and Humbug Creek, San Domingo Wash in Arizona and the Majuba Mountains, Black Rock Desert and Rye Patch areas of Nevada.

Some 25 of my 30 years of government service have related to biological research. A lifetime of biological testing on toxicity and nutrient pollution in the aquatic environment provides a sound basis for appreciating the magnitude of impacts associated with the asserted environmental contaminants, and gives a quantitative perspective generally lacking in general biologists, which leaves them less able to ascertain which environmental effects are significant and which arenâ€™t.

I would like to comments on statements attributed to Dr. Peter Moyle recently and in previous legal declarations. Dr. Moyle has had an eminent career in the fisheries sciences. He is well published and respected. However, I believe he is entirely out of his realm regarding factual information about suction dredging. I believe this is proven by his words.

In a Lake County News article written November 17, 2009 by Elizabeth Larson Dr. Moyle was cited as follows:

Dr. Peter Moyle, professor of wildlife, fish and conservation biology at the University of California, Davis' Center for Watershed Sciences, has

conducted studies on the practice and concluded that it has a negative impact.

It is too soon to tell if the moratorium has had a positive impact on salmon populations and in fact this will always be hard to demonstrate because **no one is studying the issue**, Moyle told Lake County News in an e-mail message. (my comment: So Dr. Moyle has studied the issue while stating, "no one is studying the issue???:.)

Moyle said the state's fisheries agencies, such as DFG, are woefully short of funds and manpower to do their jobs. Also there are multiple factors affecting the fish populations so separating causes is difficult, he wrote.

But given the severely threatened nature of summer steelhead, spring chinook salmon, and coho salmon populations **it is best to assume that dredging (and associated activity) is having a negative impact unless it can be proven otherwise**. As studies show, there are lots of reasons to suspect an impact is there, Moyle noted.

I find this *guilty until proven innocent* attitude disturbing coming from a scientist. However, Dr. Moyle has been consistent in his position of denying the rights of suction dredgers to perform their mining operations while clearly stating that he has no scientific cause effect relationship that suction dredging has ever harmed a single fish.

In a legal declaration submitted in the case of the Karuk Tribe vs. the California Department of Fish and Game in the Superior Court of California Dr Moyle held to the same position as follows: In his declaration, Dr. Moyle states, I agree with the thrust of Harvey and Lisle (1998), that it should be assumed that dredging is harming declining species unless it can be proven otherwise.

I believe the weight of the available scientific literature establishes that this is NOT the case. In particular, in April 2003 Dr. Peter B. Bayley, of the Department of Fisheries and Wildlife, Oregon State University, Corvallis, OR published a final report titled Response of fish to cumulative effects of suction dredge and hydraulic mining in the Illinois subbasin, Siskiyou National Forest, Oregon . Dr. Bayley stated that, Harvey and Lisle (1998) opine that effects of dredging commonly appear to be minor and local, but stress that cumulative effects of several operations at larger scales have not been investigated. This is

one reason this study has been undertaken. Because most suction dredge mining activity in the Rogue basin and the Siskiyou National Forest was concentrated in the Illinois River drainage, the study described here was limited to the drainage of that subbasin. Dr. Bayley concluded, Localized, short-term effects of suction dredge mining have been documented in a qualitative sense. However, on the scales occupied by fish populations such local disturbances would need a strong cumulative intensity of many operations to have a measurable effect. Local information reveals that most suction dredge miners more or less adhere to guidelines that have recently been formalized by the Forest Service and generally in the Oregon. Dr. Bayleys study and other works confirm that even when analyzed from a cumulative effects perspective, there is no reason to believe that suction dredge mining is deleterious to fish.

Dr. Moyle goes on to state, **It should be ASSUMED there is harm, unless it can be proven otherwise. One reason for taking this conservative position is that we simply do not know the effect of dredging on many species.** He went on to further state that, Even for salmonids, **information on the effects of dredging**, with the exception of a few studies such as Harvey (1989), **is largely anecdotal** or in non-peer reviewed reports . Dr. Moyle continues with the statement, In particular, coho salmon, spring-run Chinook salmon, and summer steelhead are particularly vulnerable to the immediate effects of dredging and have been reduced to low numbers in the Klamath Basin so need special protection .

This is mere opinion without scientific supporting data, for as previously described, Dr. Moyle has in substance acknowledged that he does NOT have any documentation to support these assertions. As far as I can tell, the perception of Dr. Moyle and others of the condition of salmonid stocks is rooted in misconceptions concerning the relative importance of fresh water habitat as compared with ocean conditions and harvest which are of much greater importance in the population dynamics of these fish.

Joseph C. Greene

Research Biologist, USEPA, Retired